

# Taking A Lead and Copper Sample Properly

Sometimes water samples exceed the action level because of a sampling error. To ensure that this does not happen to you, follow these steps when taking the Lead and Copper samples from your water system.



## Step One



Samples must be taken at DEC approved sites, please refer to your lead and copper sample siting plan or contact your systems program specialist. Sample site changes must be approved by DEC in writing.

## Step Two



Get the appropriate sample bottles and required paperwork from your laboratory.

## Step Three



Prior arrangements will need to be made with the customer to coordinate the sample collection event.

## Step Four



Do not remove the aerator prior to sampling. Be sure to choose a cold water tap that is routinely used by the household or facility i.e. kitchen or bathroom sink. Flush the cold water line for three to four minutes before beginning the no flow period.

**Do NOT** remove the aerator prior to sampling.

If sample taps have screens or aerators, they should be removed, cleaned, and flushed 2-3 times a year but never immediately prior to sampling.

## Step Five



Water must remain motionless in the lines for a minimum of 6 hours. This means there will have been no water usage on the premises for at least 6 hours (do not exceed 8 hours). For example: no showers, no use of toilet, no washing, etc. An ideal time to get a sample is first thing in the morning.

## Step Six



Place the container directly under the tap that is being sampled and slowly turn on the cold water to a gentle stream until the sample bottle is full. Fill the container according to the instructions from your certified laboratory. Do not overflow the bottle. Clearly label the bottle with the sample site, date, and time.

## Step Seven



Fill out the chain of custody and any other required paperwork from the laboratory. Make sure the container is labeled with the same information on the chain of custody and your sample recording form. Always keep a copy for your files.

## **NOTE:**

IF ANY PLUMBING HAS BEEN REPAIRED OR REPLACED SINCE THE PREVIOUS SAMPLING EVENT, CONTACT YOUR PROGRAM SPECIALIST BEFORE SAMPLING



Ship sample containers according to the certified laboratory's instructions

# Lead and Copper Rule

The Lead and Copper Rule (LCR) requires all Community and Non transient Non Community public water systems to collect tap water samples to determine lead and copper levels to which customers may be exposed. Lead and Copper enter our drinking water primarily as a result of the corrosion of materials containing copper and lead (copper pipes and lead solders) in our household plumbing and, to some extent, in the water distribution system. When over 10% of the sample sites sampled in a community have lead and copper levels above the Action Levels (AL) of 15 and 1300 parts per billion (ppb) respectively, the system is required to have a program in place to minimize lead and copper in drinking water. That program may include a corrosion control treatment plan and public education for Lead.

## Health effects of Lead:

Lead can cause serious health problems if too much enters your body from drinking water or other sources. It can cause damage to the brain and kidneys and can interfere with the production of red blood cells that carry oxygen to all parts of your body. The greatest risk of lead exposure is to infants, young children, and pregnant women. Scientists have linked the effects of lead on the brain with lowered IQ in children. Adults with kidney problems and high blood pressure can be affected by low levels of lead more than healthy adults. Lead is stored in the bones and it can be released later in life. During pregnancy, the child receives lead from the mother's bones, which may affect brain development.

## Health effects of Copper:

Copper is a naturally occurring common metal found throughout the environment in which we live. Copper is also an essential element in our diets, just like iodine, copper plays an important role in the metabolism of foods we eat, and is part of the chemical structure of many of the enzymes that make our body work. There is no evidence that copper causes diseases in humans, however, at elevated levels, copper is considered to be an irritant, and may cause stomach or intestinal distress. Among people who are predisposed to Wilson's Disease (a hereditary metabolic condition found in 1 out of every 30,000 individuals) copper at elevated levels will aggravate the disease.

## What can consumers Do?

Elevated lead level may also be due to conditions unique to your home, such as the presence of lead solder or brass faucets, fittings, and valves that may contain lead. There are actions you can take to reduce exposure. We strongly urge you to take the steps below to reduce your exposure to lead in drinking water.

- Run your water to flush out lead. If water hasn't been used for several hours, run water for 30 seconds to 2 minutes until it becomes cold or reaches a steady temperature before using it for drinking or cooking.
- Use cold water for drinking, cooking and preparing baby formula.
- Do not boil water to remove lead.
- Use bottled water for drinking and cooking.
- Identify and replace your plumbing fixtures that contain lead and/or lead solder.

## How can Lead and Copper in water be reduced?

Those systems which exceed the AL requirements for lead and copper trigger corrosion control requirements and may first have to conduct studies to compare the effectiveness of

- pH and alkalinity adjustment (reduces the acidity of the water);
- calcium adjustment (promotes the formation of protective coatings inside pipes); and the
- addition of phosphates or silica-based corrosion inhibitor (forms protective coating inside pipes).

After the corrosion control study is completed and a treatment is designated, systems will have 24 months to install optimal corrosion control treatment and 12 months to collect follow-up samples to determine treatment effectiveness. Within 6 months after follow-up sampling, water quality parameters are set, in which the water system must continue to operate. These water quality parameters include pH, alkalinity, calcium, orthophosphate and silica.

